

REMARKS

Claims 1, 3-9, 11-17, 19-25 and 27-29 are pending in the application. Claims 1, 3-9, 11-17, 19-25 and 27-29 have been rejected under 35 U.S.C. §103(a) as being deemed unpatentable by U.S. Patent No. 6,732,230 (Johnson et al.) in view of U.S. Patent No. 5,615,352 (Jacobson et al.).

Of the Claims, Claims 1, 9, 17 and 25 are independent. Claims have been amended to clarify the Applicants' claimed invention. The application as amended and argued herein, is believed to overcome the rejections.

Regarding Objections to the Claims

Claim 27 is objected to because it is dependent on a canceled Claim. In response Claim 27 has been amended to depend on Claim 25. Removal of the object to Claim 27 is respectfully requested.

Regarding Rejections under 35 U.S.C. § 103(a)

Claims 1, 3-9, 11-17, and 19-25 have been rejected under 35 U.S.C. §103(a) as being deemed unpatentable by U.S. Patent No. 6,732,230 (Johnson et al.) in view of U.S. Patent No. 5,615,352 (Jacobson et al.).

An embodiment of the Applicants' invention is directed to online data migration from a non-RAID volume to a RAID volume. (See, for example, Page 7, line 15 – Page 9, line 20.)

Turning to the cited references, Johnson discusses a method for converting a non-RAID storage volume into a RAID array and for converting a storage volume structured in one RAID level to another RAID level without using an external backup device. (See, col. 6, lines 6-20.)

Jacobson discusses a method for enlarging the storage capacity of a hierarchical disk array data storage system which stores data according to different levels of redundancy, or RAID levels. (See, Abstract.)

To establish a *prima facie* case for obviousness under 35 U.S.C. 103(a), (1) there must be some suggestion or motivation to combine reference teachings; (2) there must be a reasonable expectation of success; (3) the references when combined must teach or suggest all the claim

limitations. For the reasons discussed below, it is respectfully submitted that the Office has not established a *prima facie* case under 35 U.S.C. 103(a) for claims 26-29 and that therefore, claims 26-29 are allowable.

The references when combined do not teach or suggest all the claim limitations

The Office has cited Johnson col. 7, line 65 – col. 8 line 9 which recites:

“The system and method migrate the collection of information of a source data carrier independently of the source carrier’s file system and the way the source is originally logically partitioned. Creating a newly-structured volume according to the invention (in the form of an assemblage of data carriers) does not require that specific information in partitions of the source data carrier, such as boot record(s), root directories and associated files, be interpreted during the process.”

as teaching the Applicants’ claimed:

“in response to a request to access one or more other portions of the data stored in the non-RAID volume at least one of received and issued by one or more operating system processes while at least one of the reading and the writing is occurring, issuing an access request to request accessing of the one or more other portions of the data and accessing the one or more other portions of the data while the at least one of the reading and the writing is occurring.”

In contrast, Johnson merely discusses how the data migration is performed, for example, “automatically” and “independently”. The data migration is performed “automatically”, that is, without the need for a backup device. The migration is also performed “independently of the source carrier’s file system and the way the source is originally logically partitioned”, that is, “creating a newly-structured volume …does not require that specific information in partitions of the source data carrier, such as boot record(s), root directories and associated files, be interpreted during the process”, for example, the migration may be independent of the file system organization or logical partition, for example, through the use of strips of a chosen size or on a partition-by-partition basis independent of any original partitions.

Johnson’s discussion of migration without the need to interpret boot record(s), root directories and associated files does not teach or suggest the Applicants’ claimed “issuing an access request to request accessing of the one or more other portions of the data and accessing the one or more other portions of the data while the at least one of the reading and the writing is occurring”. In contrast, Johnson teaches away from “accessing of the one or more other portions” by performing the migration without accessing partitions of the source carrier which

merely suggests that only the partitions or stripes to be migrated are accessed during the migration.

Furthermore, the Office action does not identify any evidence in Johnson indicating or in any way suggesting the desirability of the proposed modifications. “The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification.” *In re Fritch*, 23 U.S.P.Q.2d 1780, 1783-84 (Fed. Cir. 1992).

The Office has cited col. 1, line 56 – col. 2, line 2 of Jacobson which recites:

“One problem encountered in the design of disk array data storage systems concerns the task of adding more storage disk drive devices to increase the storage capacity of the disk array. Conventional disk arrays require the following lengthy process. First, the data currently stored on the disk array is copied to an entirely separate storage device (such as a reel-to-reel tape storage system). Next, the new storage disks are added to the disk array. The entire disk array is then reconfigured to incorporate the new storage disks. Finally, the data is copied from the separate storage device back to the newly configured disk array. Unfortunately, the disk array is not accessible during this process and the data, which has been temporarily transferred to a separate backup system, is unavailable.”

as teaching the Applicants’ claimed:

“request to access one or more other portions of the data stored in the non-RAID volume at least one of received and issued by one or more operating system processes while at least one of the reading and the writing is occurring”

as claimed by the Applicants in Claim 1.

In contrast, Jacobson merely discusses increasing the storage capacity of a disk array by migrating a first RAID volume to a second RAID volume. There is no discussion of “request to access one or more other portions of the data store in the non-RAID volume” because there is no teaching or suggestion of performing a migration from a non-RAID volume to a RAID volume. Therefore, separately or in combination, Johnson and Jacobson do not teach or suggest the Applicants’ claimed invention. Even if combined, the present invention as now claimed does not result as argued above.

Claims 3-8 are dependent claims that depend directly or indirectly on claim 1, which has been shown to be non-obvious of the cited art. Independent claims 9, 17 and 25 recite a like distinction and are thus patentable over the cited reference. Claims 11-16 depend directly or

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indirectly on claim 9, and claims 19-24 depend directly or indirectly on claim 17 and are thus patentable over the cited reference.

Accordingly, the present invention as now claimed is not believed to be made obvious from the cited references. Removal of the rejections under 35 U.S.C. § 103(a) and acceptance of claims 1, 3-9, 11-17, and 19-25 is respectfully requested.

Reply under 37 C.F.R. § 1.116
Technology Center 2111

CONCLUSION

In view of the foregoing, it is submitted that all claims (claims 1, 3-9, 11-17, 19-25 and 27-29) are in condition of allowance. The Examiner is respectfully requested to contact the undersigned by telephone if such contact would further the examination of the above-referenced application.

Please charge any shortages and credit any overcharges to Deposit Account Number 50-0221.

Respectfully submitted,

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